

INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB 03/05262

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K47/34 A61K47/42 A61K48/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, CHEM ABS Data, MEDLINE, EMBASE, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	ECCLESTON M E ET AL: "Optical characteristics of responsive biopolymers; co-polycondensation of tri-functional amino acids and Cy-3 bis-amine with diacylchlorides" POLYMER, ELSEVIER SCIENCE PUBLISHERS B.V, GB, vol. 45, no. 1, January 2004 (2004-01), pages 25-32, XP004479310 ISSN: 0032-3861 the whole document ----- -/--	1-152

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

5 April 2004

Date of mailing of the international search report

26/04/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Villa Riva, A

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>ECCLESTON M E ET AL: "pH-responsive pseudo-peptides for cell membrane disruption" JOURNAL OF CONTROLLED RELEASE, ELSEVIER SCIENCE PUBLISHERS B.V. AMSTERDAM, NL, vol. 69, no. 2, 3 November 2000 (2000-11-03), pages 297-307, XP004237286 ISSN: 0168-3659 cited in the application abstract figures 4,5 page 306, Section 4. Conclusions</p>	1-147
X	<p>BOUDREAUX C J ET AL: "CONTROLLED ACTIVITY POLYMERS. XI HYDROLITIC RELEASE STUDIES OF HYDROPHILIC COPOLYMERS WITH LABILE ESTERS OF MODEL ALLELOPATHIC PHENOLS" JOURNAL OF CONTROLLED RELEASE, ELSEVIER SCIENCE PUBLISHERS B.V. AMSTERDAM, NL, vol. 44, no. 2/3, 17 February 1997 (1997-02-17), pages 185-194, XP000636958 ISSN: 0168-3659 abstract figure 2</p>	141-144, 147
X	<p>CHEE C K ET AL: "Fluorescence investigations of the thermally induced conformational transition of poly(N-isopropylacrylamide)" POLYMER, ELSEVIER SCIENCE PUBLISHERS B.V, GB, vol. 42, no. 12, June 2001 (2001-06), pages 5079-5087, XP004230971 ISSN: 0032-3861 abstract figure 6 pages 5086-5087, Section 4. Conclusions</p>	141-144, 147
X	<p>TONGE S R ET AL: "Responsive hydrophobically associating polymers: A review of structure and properties" ADVANCED DRUG DELIVERY REVIEWS, vol. 53, no. 1, 3 December 2001 (2001-12-03), pages 109-122, XP002276152 & ISSN: 0169-409X the whole document</p>	1-152

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/092554 A (BRAUN SERGE ; MEYER OLIVIER (FR); HEISSLER DENIS (FR); TRANSGENE SA (F) 21 November 2002 (2002-11-21) page 5, lines 3-11 page 9, lines 1-20 page 30, lines 1-15 claims	1-152
X	US 5 948 878 A (BURGESS STEPHEN W ET AL) 7 September 1999 (1999-09-07) the whole document	1-152

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 1-139, 146-152 are directed to a method of treatment of the human/animal body or a diagnostic method, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☒ Claims Nos.: 1-152 (part)
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.1

Although claims 1-139, 146-152 are directed to a method of treatment of the human/animal body or a diagnostic method, the search has been carried out and based on the alleged effects of the compound/composition.

Continuation of Box I.2

Claims Nos.: 1-152 (part)

Present claims 1-152 relate to a method or compounds defined by reference to a desirable characteristic or property, namely the hypercoiling capability of the polymers. The claims cover all methods and compounds having this characteristic or property (in fact all peptides belong to this category), whereas the application provides support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT for only a very limited number of such products/compounds/methods/apparatus. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). An attempt is made to define the method or compounds by reference to a result to be achieved. The search has been carried out for those parts of the claims which appear to be clear, supported and disclosed, namely those parts relating to the compounds mentioned also in Eccleston et al., J. Controlled Release 69,297 (2000), and to the general concept of drug carrier polymers which react to e.g. pH or temperature changes by changing the conformation.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

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Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 02092554	A	21-11-2002	CA	2447548 A1	21-11-2002
			WO	02092554 A1	21-11-2002
			EP	1389182 A1	18-02-2004
US 5948878	A	07-09-1999	AU	6978198 A	11-11-1998
			WO	9846274 A2	22-10-1998